

## TAPERED INSULATION

### ROOF APPLICATIONS

Insulation is a vital component of a building's envelope. For building designers requiring the highest quality rigid insulation, ThermalStar® Tapered Insulation provides unmatched quality, with a stable long term R-value that will last the lifetime of your structure.

Manufactured under an industry leading quality control program monitored by UL and ICC-ES, ThermalStar Tapered Insulation meets or exceeds ASTM C578 standards, providing an HFC free, recyclable rigid insulation with a low Global Warming Potential (GWP).

### PHYSICAL PROPERTIES

| PROPERTY                                                   | ASTM TEST METHOD | TAPERED INSULATION                                |           |         |         |          |         |
|------------------------------------------------------------|------------------|---------------------------------------------------|-----------|---------|---------|----------|---------|
|                                                            |                  | 10                                                | 13        | 15      | 25      | 40       | 60      |
| Compressive Strength (psi) at 10% Deformation <sup>1</sup> | D1621            | 10                                                | 13        | 15      | 25      | 40       | 60      |
| ASTM Classification                                        | C578             | Type I                                            | Type VIII | Type II | Type IX | Type XIV | Type XV |
| R-value per inch at 75°F Mean Temperature                  | C518             | 3.9                                               | 3.9       | 4.2     | 4.4     | 4.4      | 4.5     |
| R-value per inch at 40°F Mean Temperature                  | C518             | 4.2                                               | 4.3       | 4.6     | 4.8     | 4.8      | 4.9     |
| R-value per inch at 25°F Mean Temperature                  | C518             | 4.4                                               | 4.5       | 4.8     | 5.0     | 5.0      | 5.1     |
| Flexural Strength (psi)                                    | C203             | 25                                                | 30        | 35      | 50      | 60       | 75      |
| Water Absorption (% by volume) 24 Hour Immersion           | C272             | 3.0                                               | 2.0       | 2.0     | 1.0     | 1.0      | 1.0     |
|                                                            |                  | 24 Hour Immersion & 24 Hours @ 50% RH             | 0.3       | 0.3     | 0.3     | 0.3      | 0.3     |
| Water Vapor Permeance at 1" Thick (perms)                  | E96              | 5.0                                               | 3.5       | 3.5     | 2.5     | 2.5      | 2.5     |
| Surface Burning - Flame Spread                             | E84              | <25                                               | <25       | <25     | <25     | <25      | <25     |
| Surface Burning - Smoke Developed                          | E84              | <450                                              | <450      | <450    | <450    | <450     | <450    |
| Maximum Use Temperature                                    | -                | Short Term (10-15 minutes) 180°F, Long Term 165°F |           |         |         |          |         |

<sup>1</sup> ThermalStar Tapered Insulation is elastic up to 1% deformation. A safety factor of 3 is recommended for long term loads to minimize long term deflection.

# CODE COMPLIANCE

ThermalStar Tapered Insulation complies with the model building codes when properly installed, as found in the following code reports and classification listings:

- ASTM C578 – (See product marking for type)
  - Physical Properties – UL QORW.R16529
  - Surface Burning – UL BRYX.R16529
  - CAN/ULC-S102.2, S701 – ULC BOZCC.R16529
- International Energy Conservation Code (IECC) – ICC-ES ESR-1962, UL ER16529-01
  - International Residential Code (IRC) – ICC-ES ESR-1962, UL ER16529-01
  - International Building Code (IBC) – ICC-ES ESR-1962, UL ER16529-01
  - NFPA 285 Approved Assemblies - UL ER16529-01

# WARRANTY

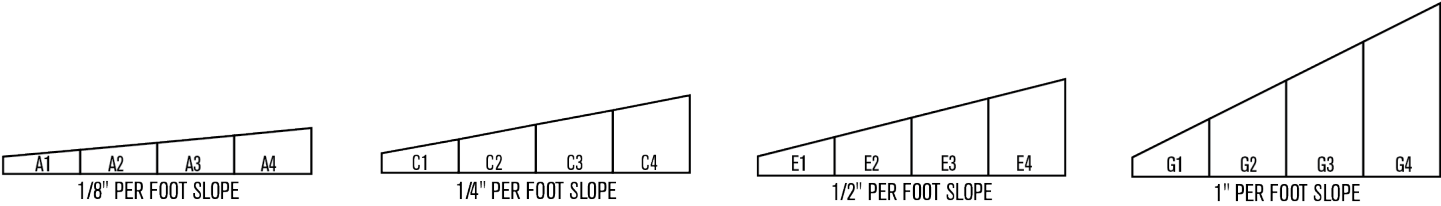
ThermalStar Tapered Insulation is backed by a limited lifetime warranty for physical and thermal performance. See separate ThermalStar warranty for terms and conditions.

# STANDARD PRODUCT OFFERINGS

Atlas has a dedicated tapered department to help meet the design and specification needs of your project. ThermalStar Tapered Insulation is offered in a one-layer, integral system or modular approach.

|                      |                                                |
|----------------------|------------------------------------------------|
| COMPRESSIVE STRENGTH | 10 psi, 13 psi, 15 psi, 25 psi, 40 psi, 60 psi |
| SIZE                 | 4'x4' and 4'x8' panels                         |
| THICKNESS            | 1/2" to 24" in a single layer                  |

# EXAMPLE TAPERED CROSS-SECTIONS



FOR ADDITIONAL RESOURCES, VISIT THE ROOF INSULATION SECTION OF OUR WEBSITE [ATLASMOLDEDPRODUCTS.COM](https://atlasroofing.com)



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